

WHAT IS CLAIMED IS:

1. An encoder comprising: a fixed member; a rotary member; and a click mechanism for stabilizing the rotary member at each rotation for a predetermined click angle, one of the fixed member
5 and the rotary member being provided with an electrode having A-channel, B-channel and C-channel patterns, the other being provided with contacts which are to be opposed to the electrode so that as the rotary member is rotated, a state between the A-channel and the C-channel and a state between the B-channel
10 and the C-channel switch between a first state and a second state according to contact/noncontact between the respective contacts and the electrode, wherein

one of the first state and the second state is a conductive state, and the other is a nonconductive state, wherein

15 (a) the state between the A-channel and the C-channel switches between the first state and the second state at each rotation of the rotary member for the click angle,
(b) as the rotary member is rotated for the click angle in one direction from a reference phase where the state between
20 the A-channel and the C-channel is in the first state while the rotary member is stabilized by the click mechanism, the state between the B-channel and the C-channel remains unchanged from the first or second state, and
(c) as the rotary member is rotated for the click angle in
25 an opposite direction from the reference phase, the state between the B-channel and the C-channel switches twice between the first state and the second state.

2. An encoder according to claim 1, wherein the state between the B-channel and the C-channel switches such that one of the first state and the second state continues longer than the click angle and the other continues shorter than the click angle.

3. An encoder according to claim 1, wherein when the rotary member is stabilized by the click mechanism, at least one of the A-channel pattern and the B-channel pattern of the electrode 10 is electrically disconnected from the contacts.

4. An encoder according to claim 1, wherein the A-channel pattern, the B-channel pattern and the C-channel pattern of the electrode are separated from each other, and the contacts 15 include sliders which are electrically connected together and are opposed to the A-channel pattern, the B-channel pattern and the C-channel pattern, respectively, wherein as the rotary member is rotated, the individual sliders are permitted to slide on the three patterns in turn.

20

5. An encoder according to claim 4, wherein the A-channel pattern, the B-channel pattern and the C-channel pattern are spaced apart from each other in a rotating direction of the rotary member.

25

6. An encoder according to claim 1, wherein a duty ratio of the first/second state between the A-channel and the C-channel

is 50%.

7. An encoder according to claim 1, wherein count up and count down are carried out in a detection circuit when the state
5 between the A-channel and the C-channel switches between the first state and the second state.